

**Massachusetts Bay
Transportation Authority**

Safety Data Analysis Report

SAFETY PERFORMANCE INDICATORS

See Notes

Bus - Safety Performance Indicators																					
Bus	2021 Monthly Target	Dec-21	2021 Target	2021 Total	2022 Monthly Target	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	2022 Target	2022 YTD		
Fatalities - Total¹	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NTD Reportable Safety Events - Total²	12	13	142	89	10	8	4	7	7	8	6	8	12	11	12	10	6	120	99		
NTD Reportable Safety Events - Rate per million revenue miles	6.00	6.65	6.00	3.71	5.21	4.26	2.37	3.63	3.83	4.35	3.26	4.45	6.35	6.50	6.53	5.59	3.32	5.21	4.54		
NTD Reportable Injuries - Total²	31	35	367	264	27	18	21	19	21	18	22	19	28	35	43	13	20	324	277		
NTD Reportable Injuries - Rate per million revenue miles	15.50	17.90	15.50	11.01	14.00	9.59	12.42	9.86	11.50	9.80	11.95	10.57	14.83	20.69	23.40	7.26	11.07	14.00	12.70		
Customer Injuries - Rate per million passenger trips	2.95	4.71	2.95	2.99	2.93	2.18	3.30	2.74	2.57	2.29	2.16	1.96	2.12	4.07	3.72	1.42	2.02	2.93	2.56		
Collisions - Rate per million revenue miles	85.63	64.44	85.63	58.60	57.42	74.58	79.83	77.88	63.51	81.08	65.75	60.09	81.54	90.43	72.37	83.82	67.56	57.42	74.78		
with Vehicle - Rate per million revenue miles	N/A	48.59	N/A	45.08	44.18	59.66	61.50	60.75	53.11	64.21	52.71	46.74	65.13	72.70	58.76	68.18	55.37	44.18	59.84		
with Object - Rate per million revenue miles	N/A	11.25	N/A	9.93	9.73	11.72	14.78	13.50	7.67	14.15	9.78	11.13	11.65	13.00	11.43	11.18	8.31	9.73	11.51		
with Person - Rate per million revenue miles	N/A	1.53	N/A	1.54	1.51	0.53	1.77	2.08	1.10	1.09	1.09	1.11	1.59	2.96	1.09	1.68	0.55	1.51	1.38		
with T Vehicle - Rate per million revenue miles	N/A	3.07	N/A	2.04	2.00	2.66	1.77	1.56	1.64	1.63	2.17	1.11	3.18	1.77	1.09	2.79	2.21	2.00	1.97		
Reportable Smoke/Fire Incidents	1	2	15	16	1	1	0	0	1	2	0	3	2.00	1	2	2	0	15	14		
Mean Miles between Mechanical Failures	18,000	31,775	18,000	28,638	25,000	18,531	22,047	26,099	25,623	25,199	27,128	23,317	17,374	16,595	22,229	14,685	19,428	25,000	20,791		

1 In accordance with FTA performance target guidance, trespasser and suicide related fatalities are excluded from fatality counts

2 In accordance with FTA performance target guidance, security related events (including suicides/attempted suicides) are excluded from the safety events total



SAFETY PERFORMANCE INDICATORS - Heavy Rail

See Notes

Heavy Rail - Safety Performance Indicators					2022 Safety Performance Indicators															
Heavy Rail	2021 Monthly Target	Dec-21	2021 Target	2021 Total	2022 Monthly Target	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	2022 Target	2022 YTD	
Fatalities - Total ¹	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	3
NTD Reportable Safety Events - Total ²	2	2	24	24	2	0	3	1	2	5	2	2	3	4	0	0	0	3	24	25
NTD Reportable Safety Events - Rate per million revenue miles	1.00	1.04	1.00	1.09	1.00	0.00	1.78	0.52	1.09	2.75	1.18	1.31	2.17	3.23	0.00	0.00	2.05	1.00	1.32	
NTD Reportable Injuries - Total ²	18	17	221	184	16	23	18	18	23	17	16	14	11	17	14	20	11	195	202	
NTD Reportable Injuries - Rate per million revenue miles	9.45	8.87	9.45	8.39	8.46	12.54	10.66	9.32	12.56	9.36	9.42	9.14	7.96	13.75	12.58	13.65	7.52	8.46	10.64	
Mainline Revenue Train Derailments	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mainline Non-Revenue Train Derailments	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
Yard Derailments	0	0	4	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	
Maintenance Vehicle Derailments	0	1	7	4	0	0	1	0	0	3	0	0	3	1	0	0	0	5		
Mean Miles between Mechanical Failures	47,000	42,484	47,000	44,617	47,500	26,193	33,891	43,898	51,980	73,942	66,535	41,019	44,136	50,554	77,170	64,826	49,750	47,500	46,811	

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2 In accordance with FTA performance target guidance, security related events (including suicides/attempted suicides) are excluded from the safety events total



SAFETY PERFORMANCE INDICATORS – LIGHT RAIL

Light Rail - Safety Performance Indicators																						
Light Rail	2021 Monthly Target	Dec-21	2021 Target	2021 Total	2022 Monthly Target	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	2022 Target	2022 YTD			
Fatalities - Total ¹	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NTD Reportable Safety Events - Total ²	3	2	34	17	2	3	3	4	2	2	5	1	5	3	1	2	2	31	33			
NTD Reportable Safety Events - Rate per million revenue miles	5.83	3.99	5.83	3.21	5.58	6.27	6.79	8.05	4.16	4.10	10.30	2.05	9.94	5.67	1.84	3.94	3.83	5.58	5.53			
NTD Reportable Injuries - Total ²	8	5	100	88	7	5	10	7	5	11	12	9	8	9	6	10	12	84	104			
NTD Reportable Injuries - Rate per million revenue miles	17.25	9.97	17.25	16.60	14.70	10.45	22.64	14.09	10.41	22.57	24.71	18.44	15.91	17.01	11.04	19.70	22.99	14.70	17.44			
Mainline Revenue Train Derailments	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1			
Mainline Non-Revenue Train Derailments	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
Yard Derailments	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4			
Maintenance Vehicle Derailments	0	0	2	1	0	1	0	2	1	1	0	0	0	0	0	0	0	0	1	5		
Mean Miles between Mechanical Failures	7,000	7,817	7,000	7,780	7,500	7,329	5,311	7,558	9,806	8,150	6,302	6,187	5,898	6,146	7,673	9,688	8,115	7,500	7,153			
Green Line	2021 Monthly Target	Dec-21	2021 Target	2021 Total	2022 Monthly Target	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	2022 Target	2022 YTD			
Customer Injuries - Rate per million passenger trips	4.23	1.56	4.23	3.53		3.48	2.00	3.00	2.21	1.70	4.38	1.77	1.35	3.85	2.55	2.16	2.98	4.77	3.48	2.72		
Collisions - Rate per million revenue miles	6.65	7.98	6.65	4.53	4.44	6.27	11.32	6.04	6.24	2.05	10.30	0.00	7.95	1.89	1.84	9.85	1.92	4.44	5.37			
with Vehicle - Rate per million revenue miles	N/A	3.99	N/A	1.70	1.66	4.18	9.06	4.03	4.16	2.05	4.12	0.00	1.99	1.89	0.00	9.85	0.00	1.66	3.35			
with Object - Rate per million revenue miles	N/A	0.00	N/A	0.75	0.74	0.00	0.00	0.00	2.08	0.00	0.00	0.00	1.99	0.00	0.00	0.00	0.00	0.74	0.50			
with Person - Rate per million revenue miles	N/A	0.00	N/A	0.94	0.92	0.00	0.00	0.00	0.00	0.00	2.06	2.05	3.98	0.00	0.00	0.00	0.00	0.92	0.67			
with T Vehicle - Rate per million revenue miles	N/A	3.99	N/A	1.13	1.11	2.09	2.26	2.01	0.00	0.00	4.12	0.00	0.00	0.00	1.84	0.00	0.00	1.11	1.01			
Reportable Smoke/Fire Incidents	4	5	45	34	3	3	8	4	2	2	2	3	3	1	1	0	2	33	31			

1In accordance with FTA performance target guidance, trespasser and suicide related fatalities are excluded from fatality counts

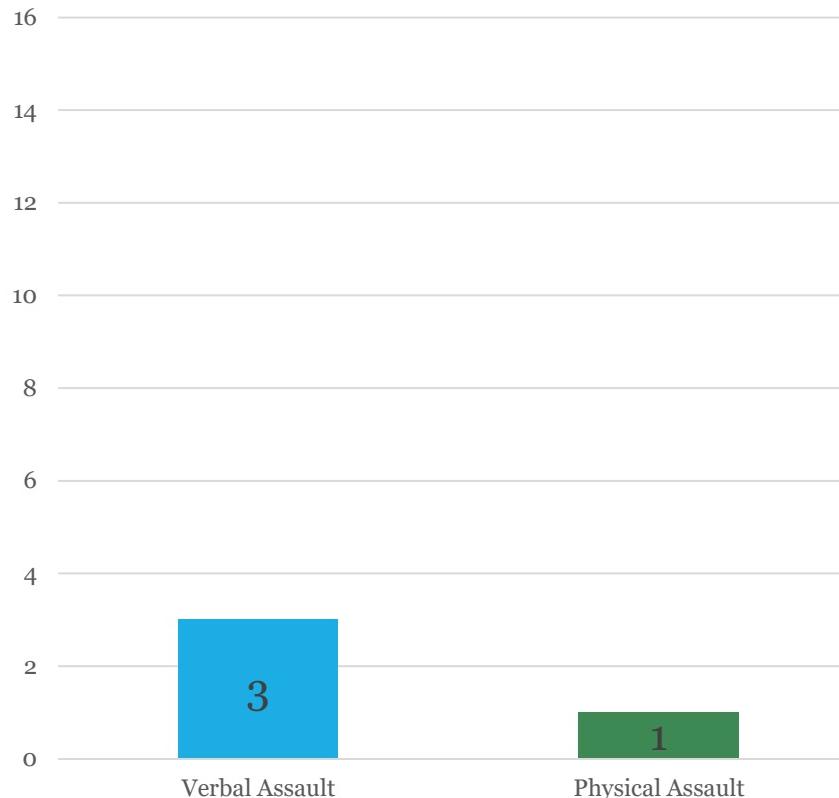
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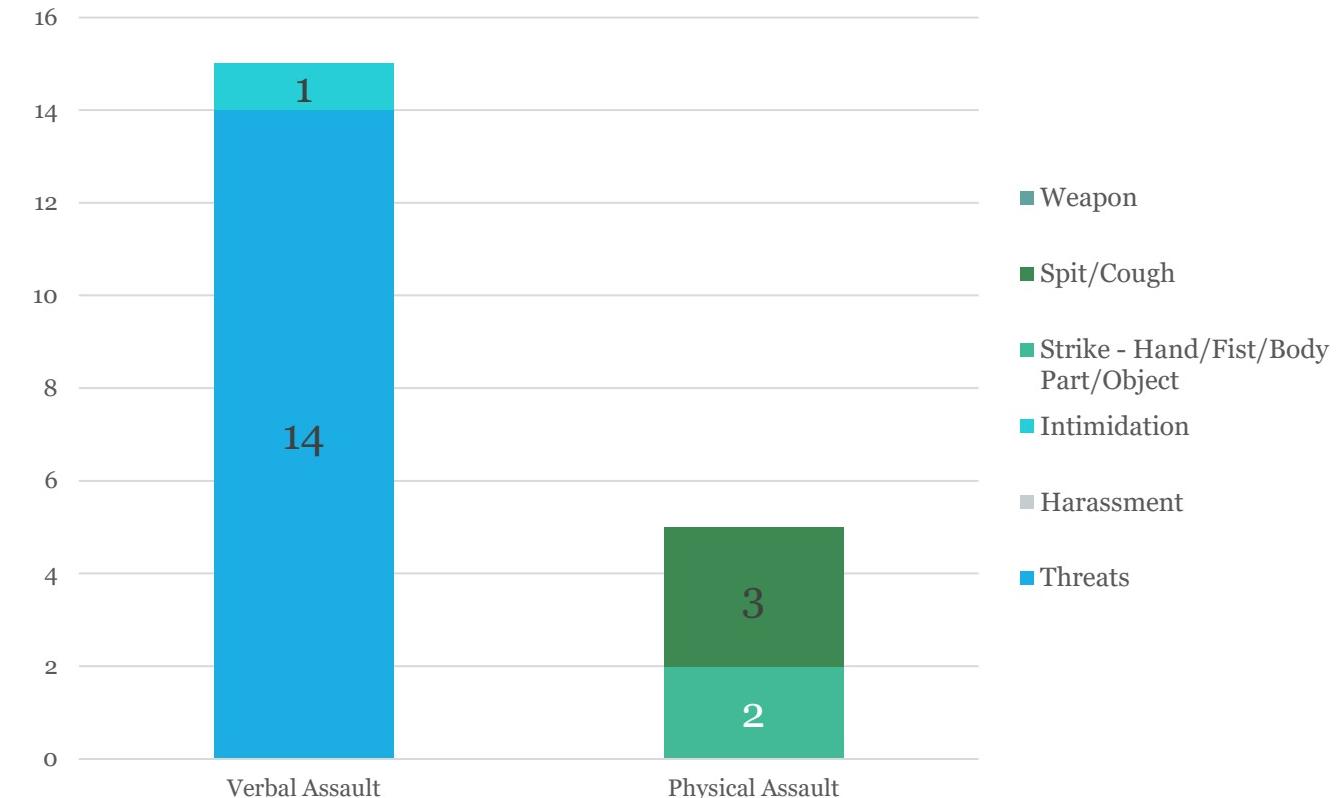
EMPLOYEE INJURIES

EMPLOYEE ASSAULTS BY MODE AND TYPE

Rail Employee Assaults



Bus Employee Assaults



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FIRE/SMOKE

CODE 1'S CONT'D

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 See Notes

December Total Reportable Incidents - IGNITED MATERIAL						
Ignited Material Type	Red	Orange	Green	Blue	Bus	TOTAL
Debris - Trash	1	0	1	0	0	2
Infrastructure - 3rd Rail / OCS	1	0	0	0	0	1
Vegetation - Leaves	0	1	1	1	0	3
TOTAL	2	1	2	1	0	6



SAFETY HOTLINE REPORTING SYSTEM

Safety Hotline Reporting Options

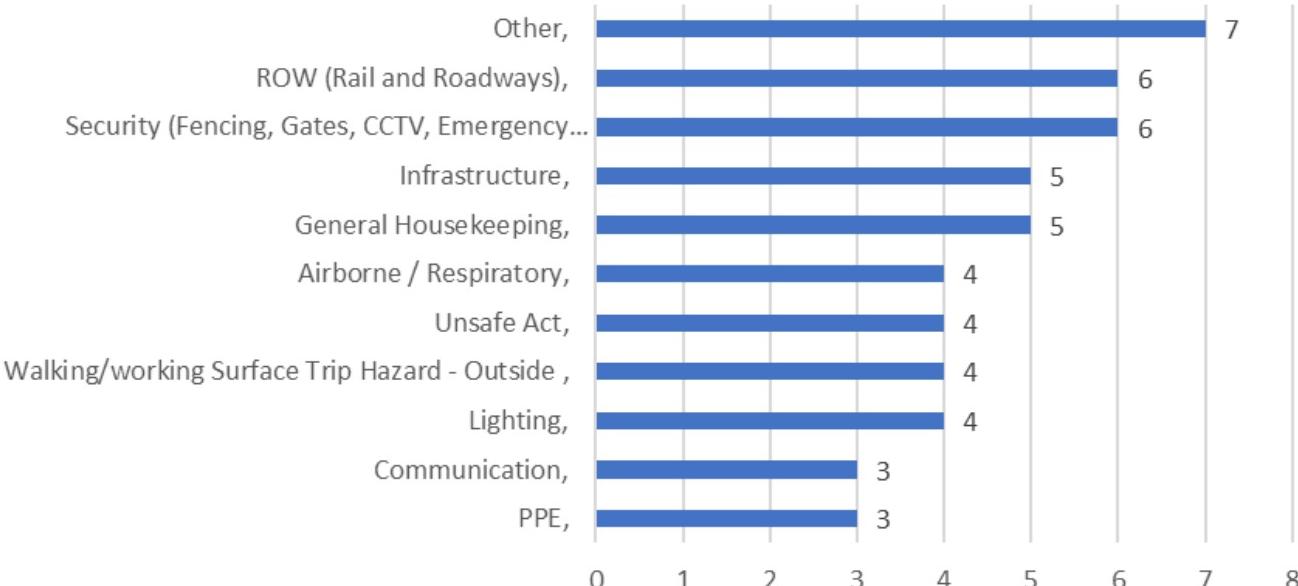
- Safety Hotline: (617) 222-SAFE/7233
- Safety Notification email:
SafetyNotification@mbta.com
- Direct reporting to an MBTA Safety official
- Submitting Form B by email, to an MBTA Safety official, or by fax: (617) 222-5127

Month	Total Reports	Closed
October 2022	24	12
November 2022	26	14
December 2022	25	13
Total	75	39

As of 12/15/2022

Employee Reportings by Hazard Types (3 or more)

Past 3 months



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